

Van Giesen (Artifacts of the C. N. S.) has shown that in making autopsies upon such cases extreme caution must be exercised, otherwise injuries inflicted in removing the spinal cord may produce the picture of any of the deformities mentioned.

Hematomyelia or localized softening occurs more frequently in the central regions of the spinal cord, the gray matter being commonly the seat of the hemorrhage, since it is more highly vascularized and less supported by connective tissue than is the white. The escaped blood may easily work its way up and down in the gray matter, as the resistance presented is small.

Hemorrhage primarily in the gray matter may become so extensive that it mechanically forces its way into the white matter. The absorption of the clot and the consequent degeneration results in the formation of a cavity. The character and extent of the destruction of the cord depends naturally upon the severity of the hemorrhage. In some cases of hematomyelia the bleeding may be disseminated. The small hemorrhage may be absorbed before great mischief has occurred, and the symptoms of localized pressure may disappear in time with recovery of the patient.

Hematomyelia followed by cavity formation in the cord without fracture or dislocation of the vertebral column, occurs more frequently in the cervical region. As the spinal column is more flexible in this region, due to the spinous processes of the vertebrae not over-lapping, this portion of the cord is more liable to stretching, which is commonly supposed to produce a rupture of the blood vessels.

It is difficult to understand how the blood vessels, rather than the more delicate nerve fibres, are first affected by the stretching of the cord, yet hemorrhage is generally considered to be the essential pathological condition.

The condition of hematomyelia has been reported as developing in the cervical region following a complete severing of the cord by fracture of the vertebrae in the lumbar region, although no fracture was present in the cervical region. This is accounted for by the fact that the cord must have been stretched in the cervical region and hemorrhage occurred.

In some cases the injury to the cord may be caused by a displacement of the vertebrae, which immediately springs back into position after the mischief has been done, leaving no evidence later of such a condition.

Cavity formation may be due either to hemorrhage which is later absorbed or to a localized necrosis. A combination of these conditions existed in the case reported.

If the patient survives long enough a secondary myelitis may develop. The systemic columnar degenerations have also been attributed to trauma, as has syringomyelia.

Such cases as the one reported emphasize the fact that serious injury or destruction of the spinal cord may occur following trauma to the vertebral column, even in the absence of fracture or dislocation of the bones.

Considering the pathological condition so produced, it becomes apparent that no hope can be placed upon surgical interference.

COMMENTS ON TROPICAL MEDICINE.

By CREIGHTON WELLMAN, Oakland.

It is significant to compare the apathy and even aversion which advocates of the study of tropical disease had to contend with a few years ago with the interest which is now evinced in this subject from all quarters. The close relation of tropical medicine to general medicine, the valuable research which has been done in the tropics, much of which throws light on medical problems at home, and the constant introduction of tropical affections into our own country have all aided in increasing this interest. Regarding the last point it should be remembered that California with its equable climate must be classed by the student of the geography of disease as part of the subtropics. We have no winter to break in upon the routine of the tropical parasitic affections which we may import, and they are consequently able to become endemic. Hence the matter of prevention is as important to us as it is to residents in some of our colonies. Prophetic in this connection is a quotation from a recent address in which Professor Osler foresees that "tropical sanitation will loom larger and larger in the future."

The invasion of Germany by cholera is an interesting and logical outcome of the Russian epidemic mentioned in our last issue and the advancement of this disease, synchronously with bubonic plague, in south China is also to be chronicled. Several important conferences on subjects relating to tropical medicine are hopeful signs of the times. The India conference on malaria and the recent conference in this country on pellagra deserve special mention. Regarding this last disease it is proper to point out here that instances of it undoubtedly exist in California, the writer having recently had opportunity of examining a case in Alameda county. The recent publications of the Sleeping Sickness Bureau in London are admirable illustrations of what can be accomplished in popularizing and disseminating information regarding a difficult technical subject. One pamphlet entitled "How to Avoid Infection" might serve as a model for similar brochures on other tropical diseases. The writer of these lines suggests amoebic dysentery as the subject of such a bulletin to be issued by the Health Departments of the bay cities.

Attention is being daily directed to what is a serious situation. We refer to the presence of endemic intestinal amoebiasis in California, especially in San Francisco and Oakland. A number of medical men have taken up the subject somewhat specially so that cases are being reported at rather alarmingly frequent intervals. The writer has seen several cases quite recently, some of which originated in Oakland. One little outburst was instructive as being traceable to the water supply of the victims. The number of cases originating around San Francisco bay is sufficient to justify a confer-

ence to discuss the medical and civic aspects of the disease.

We have recently had our attention called by Dr. Edward von Adelung of Oakland to a case of filarial haemato-chyluria in a man who has resided for years in Alameda county. The embryos in the blood are of the *bancrofti* type and present the locomotility mentioned by Craig in his description of his *Microfilaria philippinensis*. The case is under observation by Dr. von Adelung and the writer and will be referred to again.

Dr. Colby Rucker of the Marine Hospital Service informs the writer that a small indigenous wild rodent (*Netoma fuscipes anectens* Elliot) has been proven bacteriologically to be infected with the bacillus of bubonic plague. One specimen of this animal was brought to the Federal Laboratory and demonstrated by Dr. G. W. McCoy to harbor *Bacillus pestis*. This rodent is an upper and lower Sonoran form and one of its allies is a boreal form extending into the high Sierra. As the infected species is found from Oregon to Lower California, the deserts of Arizona, etc., the discovery is of great interest and importance. The fact that two genera of wild California rodents have been shown to harbor plague suggests the possibility of a general infection of our indigenous rodents obtaining in the near future.

SOCIETY REPORTS BUTTE COUNTY.

The regular monthly meeting of the Butte County Medical Society was held at the office of Dr. P. F. Bullington, December 14, at 8:30 P. M., President Dr. N. T. Enloe presiding.

Members present: Drs. C. L. Browning, P. F. Bullington, N. T. Enloe, H. M. Parker and Ella F. Gatchell of Chico and Dr. L. L. Thompson of Gridley.

The following officers were elected for the ensuing year: President, Dr. E. A. Kusel of Oroville; Vice-President, Dr. D. H. Moulton of Chico; Secretary and Treasurer, Dr. Ella F. Gatchell of Chico; Member of the Board of Censors, Dr. H. M. Parker, Chico.

After the transaction of the usual business, Dr. P. F. Bullington read a paper on drugless treatment versus medicine, which was discussed at length by the members.

ELLA F. GACHELL, Secretary.

SAN JOAQUIN COUNTY.

The San Joaquin Medical Society met in Hanford, in conjunction with the Central California Health Officers' Association, on October 12th. There was a fair attendance only. The morning hours were taken up by the Health Officers' Association. In the afternoon the following papers were read:

"Halux Valgus and Operative Treatment for the Same," by C. T. Rosson, M. D., Hanford.

Halux valgus is a condition that is by nature of its cause found only in adult life. It is a permanent abduction of the great toe and is seen in a condition from slight deviation to complete dislocation.

In the normal foot a line passing through the ball of the great toe produced backward will pass through

the ball of the heel. This condition is only seen in babyhood among civilized nations, and in the feet of most uncivilized people who have never worn shoes. All adults who have worn shoes have slight deviation of the great toe outward, which in moderate degree may be considered normal.

Pathologically speaking the condition exists when there is enough deformity to cause pain and interfere with wearing a shoe that fits the foot. The cause of the condition is wearing shoes that are not the right shape for the foot or the shoe is too narrow or short. I also believe that socks that are too short will have a tendency to cause the same trouble. It is often seen in gouty subjects and people suffering from arthritis deformans, which hints that these conditions might predispose to the disease.

The pathology is deviation of the great toe outward and in extreme cases complete dislocation of the metatarso-phalangeal joint. The great toe either lies on top of or underneath the other toes, usually the former. A bunion is on the inner side of the joint and there is deviation inward of the first metatarsal bone, making a triangular foot with the apex at the inner side of the metatarso-phalangeal joint, which is capped with a painful bunion.

The joint itself is practically destroyed, as the articular surfaces do not come together. There is a bony growth at the end of the metatarsal bone internal to the joint, causing broadening of its end. The end of the bone itself is softened and porous, making it easy to cut with a pair of ordinary scissors. The long extensor tendon is also displaced outward, pulling at an angle that tends to increase the deformity.

This condition is often associated with hammer toe, flatfoot, arthritis deformans and gout. The treatment is prophylactic, orthopedic and surgical. The prophylactic treatment is to wear shoes that are the natural shape of the feet from childhood up. The orthopedic treatment is only applicable to those of moderate deformity. It is to place the toe in the proper position and hold it there with a toe post or plaster, or in incipient cases simply make a finger in the sock for the toe and place a bunion button over the bunion. This will give satisfactory results in young subjects with slight deformity. In the more extreme cases this will do no good; it is here that we are compelled to resort to surgery. It is in these cases that the skill of the surgeon has almost been exhausted trying to get the deformity corrected and leave a good metatarso-phalangeal joint, which is essential in order to get good prosthetic results.

Keen and others recommend that the head of the metatarsal bone be resected and the great toe be placed in position, which leaves a crippled joint with practically no mobility.

The best operation, and the only one I know of that will give satisfaction, was described by Dr. Mayo this year.

The incision is made through the skin with its convexity upward and extending well upon the dorsum of the foot, exposing the long extensor tendon. This flap is dissected downward, being careful not to injure the bursa, or bunion.

Next an incision is made with its convexity pointing toward the heel and ankle down to the bone, including the lateral ligament bursa and fascia. This is dissected forward, exposing the joint, letting it hang by a good broad base to the proximal end of the great toe. The head of the metatarsal bone is cut away, making the line of resection pass at right angle through the middle of the bony growth at the head of the bone. The remaining portion of the bony growth is cut away smooth with the long axis of the bone. Now the toe is pulled into place and the bursa ligament flap pushed in between the end